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EXAMINER

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* DANIEL MULLIGAN, MATTHEW BRADY HENSON, and  
FUJIO TAKEDA

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Appeal 2007-4364  
Application 10/723,169  
Technology Center 2800

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Decided: May 12, 2008

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Before JOSEPH F. RUGGIERO, SCOTT R. BOALICK, and  
CARLA M. KRIVAK, *Administrative Patent Judges*.

RUGGIERO, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134 from the Final Rejection of claims 1-24. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

Appellants' claimed invention relates to a programmable driver which can be used on an integrated circuit that provides multiple functions for handheld devices. (Specification 2-3).

Claim 1 is illustrative of the invention and reads as follows:

1. A programmable driver comprises:

a first driver;

a second driver operably coupled in parallel with the first driver to drive a signal on to a line at a first drive level when a drive control signal is in a first state and wherein, when the drive control signal is in a second state, the second driver is in a high-impedance state such that the first driver drives the signal on to the line at a second drive level, wherein the first drive level is greater than the second drive level; and controller operably coupled to generate the drive control signal based on load requirements of the line.

The Examiner relies on the following prior art references to show unpatentability:

McMahan	US 5,859,541	Jan. 12, 1999
Pruett	US 6,490,121 B1	Dec. 3, 2002 (filed Oct. 27, 2000)

Claims 1-12 stand rejected under 35 U.S.C. § 102(b) as being anticipated by McMahan.

Claims 13-24 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over McMahan in view of Pruett.

Rather than reiterate the arguments of Appellants and the Examiner, reference is made to the Brief and Answer for the respective details. Only those arguments actually made by Appellants have been considered in this decision. Arguments which Appellants could have made but chose not to make in the Brief have not been considered and are deemed to be waived [see 37 C.F.R. § 41.37(c)(1)(vii)].

## ISSUES

- (i) Under 35 U.S.C § 102(b), does McMahan have a disclosure which anticipates the invention set forth in claims 1-12?
- (ii) Under 35 U.S.C § 103(a), with respect to appealed claims 13-24, would one of ordinary skill in the art at the time of the invention have found it obvious to combine McMahan with Pruett to render the claimed invention unpatentable?

## PRINCIPLES OF LAW

### 1. ANTICIPATION

It is axiomatic that anticipation of a claim under § 102 can be found if the prior art reference discloses every element of the claim. *See In re King*, 801 F.2d 1324, 1326 (Fed. Cir. 1986) and *Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 1458 (Fed. Cir. 1984).

In rejecting claims under 35 U.S.C. § 102, a single prior art reference that discloses, either expressly or inherently, each limitation of a claim invalidates that claim by anticipation. *Perricone v. Medicis Pharmaceutical Corp.*, 432 F.3d 1368, 1375-76 (Fed. Cir. 2005), citing *Minn. Mining & Mfg.*

*Co. v. Johnson & Johnson Orthopaedics, Inc.*, 976 F.2d 1559, 1565 (Fed. Cir. 1992). Anticipation of a patent claim requires a finding that the claim at issue “reads on” a prior art reference. *Atlas Powder Co. v. IRECO, Inc.*, 190 F.3d 1342, 1346 (Fed Cir. 1999) (“In other words, if granting patent protection on the disputed claim would allow the patentee to exclude the public from practicing the prior art, then that claim is anticipated, regardless of whether it also covers subject matter not in the prior art.”) (internal citations omitted).

## 2. OBVIOUSNESS

In rejecting claims under 35 U.S.C. § 103, it is incumbent upon the Examiner to establish a factual basis to support the legal conclusion of obviousness. *See In re Fine*, 837 F.2d 1071, 1073 (Fed. Cir. 1988). In so doing, the Examiner must make the factual determinations set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966). “[T]he examiner bears the initial burden, on review of the prior art or on any other ground, of presenting a *prima facie* case of unpatentability.” *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992). Furthermore, “‘there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness’ . . . [H]owever, the analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.” *KSR Int’l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741 (2007)(quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)).

ANALYSIS

35 U.S.C. § 102(b) REJECTION

With respect to the 35 U.S.C. § 102(b) rejection of independent claims 1 and 7 based on the teachings of McMahan, the Examiner indicates (Ans. 3) how the various limitations are read on the disclosure of McMahan. In particular, the Examiner directs attention to the illustration in Figure 3 of McMahan as well as the accompanying description at column 4, lines 14-59 of McMahan.

Appellants' arguments in response assert that the Examiner has not shown how each of the claimed features is present in the disclosure of McMahan so as to establish a prima facie case of anticipation. Appellants' arguments initially focus on the contention that, in contrast to the requirements of appealed claim 1, McMahan does not disclose a programmable driver in which the drive level is controlled in a first and second state between first and second levels. According to Appellants (Br. 5), the output buffers of McMahan are either connected to provide a predetermined impedance or disconnected to control the overall impedance. In a related argument (*id.*), Appellants contend that McMahan has no disclosure of a second drive being placed in a high-impedance state.

After reviewing the arguments of record, we are in general agreement with the Examiner's position as stated in the Answer. With respect to the claimed feature of controlling a drive level in a first and second state between first and second drive levels, we find no persuasive arguments from Appellants which convince us of any error in the Examiner's analysis and explanation as set forth at pages 6 and 7 of the Answer. We agree with the Examiner that ample evidence exists to support the view that the output

impedance of the output buffers in McMahan is correlated with the drive level of the output buffers since more drive current is present when low impedance is present at the output buffer, and vice versa.

We further agree with the Examiner, Appellants' arguments (Br. 5-6) to the contrary notwithstanding, that the disclosure at column 4, lines 24-59 of McMahan supports the conclusion that the buffers in McMahan are tri-stated as presently set forth in appealed independent claim 7. As explained by the Examiner (Ans. 5-6), when McMahan's control signals (C0, C1, Cn) are enabled, the buffers are in a first or second state (logic 1 or 0) dependent upon the input signal 48, and when the control signals are disabled the buffers are in a high-impedance third state.

We further find to be without merit Appellants' contention (Br. 6) that McMahan does not provide a disclosure of generating a control signal based on the load requirements of the programmable driver as claimed. As pointed out by the Examiner (Ans. 7-8), McMahan describes (col. 2, ll. 36-43) the relationship between buffer output load and buffer impedance enabling a user to select a control signal dependent upon the load of the buffer output line.

In view of the above discussion, since all of the claimed limitations are present in the disclosure of McMahan, the Examiner's 35 U.S.C. § 102(b) rejection of independent claims 1 and 7, as well as dependent claims 2-6 and 8-12 not separately argued by Appellants, is sustained.

### 35 U.S.C. § 103(a) REJECTION

We also sustain the Examiner's obviousness rejection of claims 13-24 in which the Examiner has applied the Pruet reference to McMahan to

address the chip integrated multiple function limitations of these claims. Appellants' arguments in response (Br. 7) rely on the arguments made previously with respect to independent claims 1 and 7 alleging the deficiencies of McMahan in disclosing the claimed buffer drive level features, which arguments we found to be unpersuasive for all of the reasons discussed *supra*.

### CONCLUSION

In summary, we have sustained the Examiner's rejections of all of the claims on appeal. Therefore, the decision of the Examiner rejecting claims 1-24 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv)(2006).

AFFIRMED

gvw

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